INDUSTRIAL HYGIENE INFORMATION AND REGULATORY ACTIONS SUMMARY
February 2002

REGULATORY ACTIONS

None of importance to Army Industrial Hygiene.

OSHA ACTIVITIES

OSHA to Issue Guidelines Rather than Regulations for Ergonomics

According to FY 2003 budget documents submitted to Congress, OSHA plans to issue guidelines rather than a new federal regulation to protect workers from musculoskeletal disorders and other repetitive motion-related injuries. Labor Secretary Elaine Chao pledged her own "comprehensive" effort last spring as Congress was voting to overturn the Clinton administration's ergonomics rule. However, citing the turmoil and shift in priorities since September 11th, announcement of OSHA's intentions has been delayed. The budget documents state that OSHA will "develop industry specific, as well as task and operational specific guidelines that address ergonomic injuries in the workplace." No further specifics have been announced.

The budget document also details enforcement efforts planned through FY 2002 as well as those planned for FY 2003. OSHA has ended its targeting of logging operation because of cited improvements in its injury and illness rates. The agency is implementing a "new emphasis program on hazardous machinery associated with amputations," in line with priorities listed in its strategic plan. OSHA will continue to focus on "industries and operations where high lead exposures are likely to be found, such as repair operations where lead based paint is either being removed or applied." In addition, OSHA plans to target meat-related sectors of the food-processing industry.

OSHA/NIOSH Budget Cuts Proposed for 2003

The administration is proposing to cut OSHA's budget by $8 million in FY 2003, less than 2 percent of its current funding. Modest cuts are planned in enforcement, with deeper cuts in the training grant programs. The cuts in the enforcement area, about $700,000 from the agency's $161 million enforcement program, are targeted at clerical and other positions unrelated to inspections. OSHA Administrator John Henshaw said the cuts are consistent with the Bush administration's emphasis on U.S. security and defense spending. The administration plan avoids deep cuts in enforcement while expanding employer-friendly compliance assistance efforts. According to the Bureau of National Affairs, OSHA's budget has increased gradually by 44 percent since FY 1996.

NIOSH would see its FY 2003 budget cut by about 10 percent from its $276.5 million current year level. The resulting $258.3 million budget, if approved by Congress, would mean the loss of $28.3 million in funding and provide the institute with less money than it was receiving just two years ago. The bulk of the reduction--approximately $25.6 million—will come from the "Extramural" portion of the institute's National Occupational Research Agenda. MSHA is also scheduled for overall cuts of approximately $4 million of its $268 million current funding.

AIHA Government Affairs Alerts

OSHA Merging Health and Safety Directorates – again. - Charles Jeffress proposed a pilot project where the directorates would be merged, the intention being that consolidation of standard setting would improve the process. When John Henshaw became OSHA administrator, one of his first actions was to dissolve this pilot project and go back to two separate directorates. Now it looks as if OSHA will again go back to one consolidated office.

Toxic Mold – With several states adopting or considering legislation to address this issue, expect a federal bill to be introduced sometime by spring. AIHA's interest is two-fold: will legislation outline the competency requirements for individuals collecting toxic mold samples; and will samples have to be analyzed by laboratories that are nationally accredited.

OSHA Identifies 13,000 Workplaces with Highest Injury and Illness Rates

OSHA sent letters to approximately 13,000 employers that their illness and injury rates were higher than average and that assistance was available to them to fix safety and health hazards. Establishments were identified through employer-reported data from a 2001 survey of 80,000 worksites. The workplaces identified had eight or more injuries or illnesses resulting in lost work days or restricted activity for every 100 full-time workers; the national average is three instances for the same number of workers.

"This identification process is a proactive tool to raise awareness that injuries and illnesses are high at these facilities," John Henshaw said. "Our goal is to identify workplaces where injury and illness rates are high, and to offer assistance to businesses so that they address the hazards and reduce occupational injuries and illnesses."

The 13,000 sites are listed alphabetically, by state, on OSHA's web site at: http://www.osha.gov/as/opa/foia/hot_8.html. The 13,000 sites are establishments in states covered by federal OSHA. The list does not include employers in the 24 states and two territories that operate their own federally-approved state OSHA programs. This list of industry groups included in the notification may be found at: http://www.osha.gov/media/oshnews/feb02/trade-20020225.html.

CONGRESSIONAL ACTIONS OF INTEREST

None of importance to Army Industrial Hygiene.

EPA ACTIVITIES

EPA Announces Transition from Use of Treated Wood Containing Arsenic

EPA Administrator Christie Whitman announced a voluntary decision by industry to move consumer use of treated lumber products away from a variety of pressure-treated wood that contains arsenic by December 31, 2003, in favor of new alternative wood preservatives. This transition affects virtually all residential uses of wood treated with chromated copper arsenate, also known as CCA, including wood used in play-structures, decks, picnic tables, landscaping timbers, residential fencing, patios and walkways/boardwalks. By January 2004, EPA will not allow CCA products for any of these residential uses.

EPA has not concluded that CCA-treated wood poses unreasonable risks to the public for existing CCA-treated wood being used around or near their homes or from wood that remains available in stores. EPA does not believe there is any reason to remove or replace CCA-treated structures, including decks or playground equipment. EPA is not recommending that existing structures or surrounding soils be removed or replaced. While available data are very limited, some studies suggest that applying certain penetrating coatings (e.g., oil-based semi-transparent stains) on a regular basis (one re-application per year or every other year depending upon wear and weathering) may reduce the migration of wood preservative chemicals from CCA-treated wood.

EPA urges that precautions should be taken when using CCA-treated woods. CCA-treated wood should never be burned, as toxic chemicals may be released as part of the smoke and ashes. Specific precautions include:

- Sawing, sanding and machining CCA-treated wood outdoors, and wearing a dust mask, goggles and gloves when performing this type of activity.
- Clean up all sawdust, scraps and other construction debris thoroughly and dispose of it in the trash (i.e., municipal solid waste).
- Do not compost or mulch sawdust or remnants from CCA-treated wood.
- Those working with the wood should wash all exposed areas of their bodies thoroughly with soap and water before eating, drinking or using tobacco products.
- Work clothes should be washed separately from other household clothing before wearing them again.

TECHNICAL ARTICLES OF INTEREST

Residential and Commercial Painters' Exposure to Lead during Surface Preparation

Citation: "Residential and Commercial Painters' Exposure to Lead during Surface Preparation," Peter F. Scholz, Barbara L. Materna, and David Harrington, AIHAJ, 63:1, pages 22-28.

Abstract Summary: "The California Painters Project was a 2-year intervention research project aimed at preventing lead poisoning among a group of residential and commercial painters in San Francisco. Analysis and modeling based on the 30-minute results for dry manual sanding and uncontrolled power sanding indicate that painters' full-shift exposures often exceed 500 micrograms per cubic meter of air ($\mu g/m^3$) and the OSHA assigned level of protection for a half-mask air-purifying respirator. These results are cause for concern because both of these surface preparation methods are widely performed wearing half-mask respirators. The data show that HEPA-exhausted power sanding reduces paint dust exposure levels by approximately 80 to 90 percent. These tools should be more widely promoted as a safer alternative work method."

Commercial and residential painters often spend considerable time in preparing surfaces for repainting. Surface preparation means sanding, scraping, burning, or otherwise removing old paint that is peeling or flaking and no longer intact to ensure that the new primer and paint will form a durable bond. Where lead paint is present, surface preparation work can produce significant amounts of lead paint dust or fume. Prior studies have shown that airborne lead levels in excess of 50 $\mu g/m^3$ are generated by power sanding and grinding, dry manual sanding and scraping, heat gun use, and propane torch burning.

Exposure monitoring was conducted for 1 day at each of 12 job sites during the summer and fall of 1994. Full shift and 30-minute short-term samples were taken, with the short-term samples targeted to one specific surface preparation method to allow correlation to the need for task-specific controls. Short-term samples were also collected for total dust to enable comparison between varying lead concentrations in the paint with a "dustiness" of the work methods. Bulk samples were also taken to determine the lead concentration in each work project.

Full-Shift Sampling - In total, 25 full-shift samples were collected at 11 of the 12 job sites, each sample from a different employee. The lead paint concentrations of these surfaces ranged from 0.04 to 42 percent. Six of the 25 samples were above the OSHA PEL. All 6 of the samples that exceeded the PEL represented work shifts that involved dry manual sanding or uncontrolled power sanding, whereas only 9 of the 19 sample results below the PEL represented work shifts that involved use of these methods. The 2 highest full-shift air samples (310 and 550 $\mu g/m^3$) were the result of dry manual

sanding on a surface that tested 18 percent lead and contained detectable lead in the top layer of paint. These results are cause for concern because both of these surface preparation methods are commonly used by residential and commercial painters, and half-mask respirators are widely used as the sole protection against the airborne lead dust.

Short-Term Airborne Sampling - Fifty-eight 30-minute task-specific samples were collected at 11 of the 12 job sites from 25 different employees. The arithmetic mean results for heat gun, wet sanding, and open flame burning were below 10 $\mu g/m^3$. The mean result for HEPA-exhausted power sanding was 33 $\mu g/m^3$; the mean result for dry manual scraping was 71 $\mu g/m^3$. In comparison, the mean results for dry manual sanding (420 $\mu g/m^3$) and uncontrolled power sanding (580 $\mu g/m^3$) were much higher.

Discussion: In the OSHA Lead in Construction Standard, manual sanding is listed as a work method that, in the absence of previous exposure data, is initially presumed to expose employees to lead in excess of 50 $\mu g/m^3$, but not in excess of 500 $\mu g/m^3$. Using the nine appropriate 30-minute sample results to model three site-specific distributions of 8-hour TWAs indicated that a significant proportion of the full-shift exposures would exceed 500 $\mu g/m^3$, and that the half-mask respirator would be inappropriate for use with manual sanding. The data from this study agree with cited EPA data and the OSHA decision to require full-face respirators with "power tool cleaning without dust collection systems". However, observations showed that full-face respirators were not used by workers in this project. Data for the HEPA-exhausted power sanding showed exposure levels averaging 52 $\mu g/m^3$. However, given the data above indicating that full-shift lead exposures from both dry manual sanding and uncontrolled power sanding can often exceed 500 $\mu g/m^3$, the authors recommend that HEPA-exhausted power sanding be more widely promoted as an alternative work method that can reduce exposures by 80 to 90%. The five open flame burning samples obtained in this study averaged 9.8 $\mu g/m^3$. Because of the small sample size, the authors did not draw any conclusions about the exposures with this method.

Conclusions: "The full-shift exposure data clearly show that 8-hour TWA lead exposures among residential and commercial painters can exceed the OSHA PEL of 50 $\mu g/m^3$ during exterior surface preparation work on lead paint surfaces. The full-shift data indicate that the higher exposures are associated with the use of dry manual sanding or uncontrolled power sanding. Analysis and modeling based on the 30-minute sample results indicate that painters are often not adequately protected by half-mask respirators when dry manual sanding or using uncontrolled power sanding on lead-containing paint. These results are cause for concern because both of these surface preparation methods are widely used, and half-mask respirators are commonly used as protection."

IAQ Tech Tip #70: Sampling for Mycotoxins During IAQ Investigations

Mycotoxins are toxic compounds produced by some types of fungi. They are non-volatile with low molecular weights. Their effects on people will vary based upon specific mold exposure, dose, sensitivity, and route of exposure. Exposure can be through inhalation, dermal contact, or ingestion. Health effects are vast and controversial, but may include idiopathic pulmonary hemosiderosis in infants, cytotoxicity, cognitive impairment, encephalopathies, immunosuppression, cancer, nosebleeds, cough, joint ache, headache, fatigue, and irritation of the eyes, skin, and respiratory tract.

Multiple mycotoxins can be produced from a single fungal species. The type(s) and amount of toxin(s) depend on the actual fungal strain, food sources, and presence or absence of other fungus. Not all fungi produce mycotoxins and production seems to depend on environmental conditions.

Air sampling for mycotoxins has important limitations and requires concentrations of fungi to be 100,000 spores or greater to ensure accurate detection of any mycotoxins. For all practical purposes, mycotoxin sampling should be done through bulk, surface or dust sampling. There are no governmental or industrial regulations concerning allowable mycotoxins or toxigenic mold spores in indoor environments. Listed below are sampling methods for bulk, surface and dust samples.

Required Equipment for Sampling

- Sterile Gloves
- Ziploc Bags for Bulk Samples
- Methanol Swabs for Surface Samples
- DustChek™ Bags for Dust Samples
- Standard Vacuum Cleaner (if dust sampling)

Sampling Methods for Mycotoxins in Bulk Samples

Bulk samples should be cut and aseptically removed from the source and placed in a clean, sterile container. The approximate weight should be 25-50 grams of sample.

When possible, select bulk samples with visible fungi contamination. Bulk materials that can be used for the determination of mycotoxins include such items as wallpaper, cardboard, wood, plasterboard, paper covered gypsum board, mineral wool, plaster, sand, linoleum, polyurethane insulation, pipe insulation and paint chips.

Sampling Methods for Mycotoxins in Surface Samples

1. Remove the swab from its wrapping and insert the swab into the vial of methanol. Ensuring that the cotton end is thoroughly saturated in the solvent.
2. Swab a calculated area and record on chain of custody. This will enable the laboratory to calculate concentrations based upon the area swabbed. If possible swab a 4" X 4" area.
3. Re-insert the swab into the methanol vial and snap the handle on the swab so the entire swab fits into the vial. Discard the broken handle of the swab. The cotton end of the swab should be totally immersed into the methanol in the vial.
4. Twist the cap tightly on the methanol vial and seal lid to vial with tape to prevent solvent spilling in shipment. Label sample vial appropriately and record on chain of custody.

Sampling Methods for Mycotoxins in Dust Samples

1. If using the dust collection cassette (DustChek™), clean vacuum hose attachment with warm soapy water, rinse with fresh water and dry thoroughly.
2. Choose an area of carpet or flooring to be sampled. The goal is to collect a significant amount of dust. Wet carpet should not be sampled by this method, as dust will not likely be drawn into the collection filter.
3. Attach collector nozzle to the hose attachment of the vacuum. (Remove the bottom end cap prior to attaching to hose.)
4. Remove top cap and set aside. Check to make sure filter is inserted into the nozzle head.
5. Vacuum for at least 2-5 minutes, to insure enough material is collected for analysis.
6. To prevent loss of material, tilt the nozzle upward before turning off vacuum. Place on the top cap to close off filter.
7. Remove nozzle from hose.
8. Gently push the filter out with your finger and place directly into a zip lock bag. Do not tap the filter, as the micro-fine dust is needed for analysis.
9. To take a second sample, wipe down the nozzle with an alcohol wipe, inside and out. Let dry for a minute and then insert a fresh filter.

When selecting an area to sample, choose an area where dust may have settled and accumulated. A sample of dust from a non-contaminated area should be collected for comparison studies and quality control purposes. Multiple samples should be collected for comparison studies to include at a minimum: a complaint and non-complaint sample.

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OTHER ITEMS OF INTEREST

Knowledge Management for EHS Professionals

Jay Brakensiek asks, "Is your organization's critical Environmental Health and Safety knowledge walking out the door?" In an article in Occupational Health and Safety, he asserts "Preservation of organizational knowledge may be one of the critical factors in determining organizational success and in providing the foundations for the success of health and safety programs. When experienced safety, health, and environmental staff leave your organization, critical information is walking out the door." Some organizations have developed systems to capture the information while others don't realize what they are losing.

Mr. Brakensiek cites a number of "knowledge capture techniques", listing strengths and weaknesses for each. The use of these tools, such as interviews, video tapes, project summaries, apprenticeships, etc., is not new. However, the use of electronic devices to capture, organize, and manage this data offers new capabilities. "Data warehousing" is designed to support decision-making through advanced data management techniques. This allows not just storage of data (discrete facts) and information (related data organized to facilitate judgment or behavior), but knowledge (set of experience, values, and insight used to evaluate and incorporate new experiences and information) as well. The author opines, "Data may reside in databases. Information may use data to compile charts and reports. Knowledge, however, is much harder to translate, requiring thought and effort and often residing only in the minds of experts."

"Expert systems" is a term to describe a process to allow "non-experts to be able to function in certain areas with all of the knowledge of an expert in that area and are designed to capture the essence of a complex knowledge system." To capture knowledge, a "subject matter expert" works with systems designers to determine the steps taken to solve a given problem, which is then fed into the expert system. This can be a very difficult process, requiring refining, and if incomplete, can lead to incorrect decisions or failure of the expert system to perform as expected.

The techniques used to capture the knowledge greatly depend on the type of knowledge – defined as explicit or tacit. Explicit knowledge is characterized as being systematic and easily captured, such as operating procedures, sampling methods, and the like. When dealing with explicit knowledge, paper-to-people processes are appropriate. Tacit knowledge is difficult to articulate and is generally acquired through personal experience. It is hard to formalize, and therefore, difficult to communicate to

others. Capturing tacit knowledge is a difficult process, involving converting tacit knowledge into explicit knowledge at a basic level, expanding it with personal experiences, and then relating it to others in that expanded form.

Successful knowledge management requires significant cost and effort. The type of knowledge desired leads to the proper process for managing it. Some may be captured and codified for later use. Other requires a person-to-person exchange for more abstract knowledge. This type of interaction allows for discussion and more interpretation than simple fact finding, but is essential for transferring strategic ideas and concepts gained through years of experience. Failure to capture the knowledge can lead organizations to flounder until the expertise can be rebuilt.

ASHRAE Releases Report on Risk Management Guidance Under Extraordinary Incidents

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) released a report of a Presidential Study Group on "Health and Safety under Extraordinary Incidents". This study group began a review in November following the events of September 11th and the subsequent Anthrax contamination incidents. The three preliminary recommendations for building owners and managers are:

- Understand your building's systems and capabilities,
- Assure that your building is performing as intended, and
- Do not make changes to the building performance until the consequences are understood.

The report lists the following system as having safety issues associated with extraordinary incidents: "Ventilation System Operation, Filter Efficiency and Bypass, Quantity of Outdoor Air, Control Access to Air Handling Components, Isolate Likely Entry Points, Fire Protection and Life Safety, Building Shell and Duct Tightness, Areas of Refuge, Preparedness Plan, and What Not to Do."

According to the report, professional engineers should be consulted before:

- Closing outdoor air intake dampers or otherwise blocking ventilation air paths;
- Changing the designed airflow pattern or quantities; and
- Modifying fire protection and life-safety systems without approval of the local fire marshal.

The report is available from the ASHRAE web site at: http://www.ashrae.org/.

Construction Industry Institute Shoots for Zero Accidents

In an article in Occupational Health and Safety, Jenae Cronk describes the efforts of the Construction Industry Institute (CII) to make the concept of "zero accidents" a reality on construction sites. The CII, located at the University of Texas at Austin, is a consortium of 90-plus member organizations that are dedicated to improving the performance of the construction industry. It has conducted research into the fundamental elements of performance in construction in a wide range of industrial, general business, and infrastructure facilities: safety, cost effectiveness, quality, and schedule performance.

The author compares the progress that CII members have achieved in reducing both recordable incidents and lost workday cases. Using OSHA's data for SIC codes 15-17, CII members reported an average Recordable Incidence Rate (RIR) of 1.03 in year 2000 compared with the 7.71 estimated RIR for the general construction industry. In Lost Workday Case Incidence Rates, CII members a rate of 0.26, compared with the rate of 3.55 (estimated) for the general construction industry. Data charts in the article show the downward trend for both the CII members and general industry, but the gap is significant.

Ms Cronk, the Administrative Associate for Education of the CII, attributes the results to application of results from CII research, educational materials, and commitment in applying safety principals. On the basis of its research findings, CII produced a four-hour education product that is directed to construction project management and members of the project team. The program presents solutions and stresses the fundamental concept that construction safety is a basic responsibility of management. The modules emphasize that costs, both direct injury expenses and indirect costs, such as production loss, schedule delays, and related administrative costs, impact project financial success.

The CII education module also presents solutions. These include the Top Five Techniques that are common to any effective Zero Accidents Program, as well as 24 sub-techniques that were identified through the research. The Top Five Techniques are:

- *Pre-Project and Pre-Task Planning* – Implementing a daily safety plan ensures foremen and workers have a heightened awareness of the safety.
- *Orientation and Training* – Owner involvement and classroom training were key in reducing accidents.
- *Recognition and Incentives* – Monetary incentives were found to contribute to increased safety results when other elements of the program were already in place.

- *Alcohol and Substance Abuse Programs* – Random screening, contraband inspections, and post-accident screening are key elements of a successful program and produce a safer, drug-free work site.
- *Incident Investigation and Accountability* – Senior management involvement in reviewing statistics and supporting accident reporting and investigation significantly improved safety performance.

The author states "if the entire U.S. construction industry performed at the same level of safety as CII member companies, assuming a total of 8.5 million construction workers in the United States, a potential savings of $16 billion could be realized." CII training materials are available for purchase at their web site: http://construction-institute.org/

These principals and techniques are nothing new to the industrial hygiene community. This program's success appears to lie in getting management's attention and "buy-in" through realization that profits, as well as potential human suffering, are affected by illnesses and injuries.

Evaluating Your Printed Training Material

Dr. Seth Serxner writes in an Industrial Safety and Health News feature, that "printed educational materials - essential to any good safety training program - must not only be of high quality but, to be most effective, must be suitable for the audience you're trying to reach." Literacy is a serious problem. Dr. Serxner cites a New England Journal of Medicine article that "about one-quarter of the U.S. adult population cannot understand written materials that require only basic reading proficiency." This poses a challenge for workers trying to understand material safety data sheets or operating instructions for machinery. The author poses a "suitability approach" that is broader than the common tendency to focus only on reading level. "It uses an assessment that addresses six themes: content, literacy demand, graphics, layout and typography, learning stimulation/motivation, and cultural appropriateness."

Dr Serxner lists six ways to evaluate your printer training materials for "suitability":

- **Content** – Training materials must address the information clearly so that the employee understands its purpose. "A clear summary and review of key points should be included to reinforce the important lessons."
- **Literacy demand** – Reading level and writing style combine to determine the readability of the materials. Use of an active voice along with an appropriate reading level can make materials easier to comprehend. "Other aspects of literacy demand include using common, explicit vocabulary; giving the context before presenting new information; and making good use of headers and topic captions."

- **Graphics** – “Simple, relevant illustrations reinforce key messages and enable the reader to grasp them independently of the text. Clear headings and legends explaining the content of any tables, lists, graphs or charts should be used.”
- **Layout** – Visual cueing devices such as color, shading and boxing are used to highlight key points. Type in all capital letters slows reading comprehension. Subheadings help make information easier to understand and remember.
- **Motivation** – “Effective materials should appropriately stimulate and motivate the reader to learn.” Appropriate examples or posing questions followed by choices for action get students involved in the training. Use simple, realistic exercises rather than complex, overwhelming ones.
- **Cultural Appropriateness** – “A valid measure of materials' cultural appropriateness is how well the logic, language and experience match that of the audience.”

The goal of training is to impact an individual’s knowledge, attitude, and importantly, behavior. Evaluation of the training is essential in determining whether the training materials aid or hinder in reaching this goal.

The Successful Consultant's Skill Set

“What are the overriding qualities that make one a successful consultant?” asks Paul Burnett in an Occupational Health and Safety feature article. Other questions asked by the author are: “Is it really smart to bring a client to the point that they don't need you any more? Is consulting a parenting/therapeutic relationship, where the goal is eventually to kick the client out of the nest? Or should one carefully balance input and output to maintain the income stream by maintaining dependency on the part of the client?” In answering these questions, Mr. Burnett asserts that it should be the goal of any ethical consultant to develop client’s safety competencies to the point where they don’t need the consultant any more.

Displaying professional integrity means providing the services needed by the client, even when there may be ways to pad things. Keeping your costs low relative to impact also makes good business sense, as you will become a valued asset called upon again when needs occur. Consultants who do not provide a real or perceived value do not receive repeat business nor the trust of the client. People skills are also essential to success as a consultant. Additionally, the author indicates, “if you can't get along with the clients (managers and workers alike), speak their language, and be comfortable with them, you won't get a chance to show off your technical safety skills. All of the integrity and business acumen in the world won't make up for lack of teaching or public speaking skills.” He concludes that “being able to communicate successfully with the client and other people skills are an overriding requirement for success as a consultant.”

INTERNET NEWS

AIHA Activates Legislative Action Center

The American Industrial Hygiene Association (AIHA) Government Affairs Group unveiled a new "Federal Legislative Action Center" within the members-only section of the AIHA web page: http://www.aiha.org/. Members will be able to follow all federal legislation of interest to AIHA. It will also provide a directory of all elected officials and senior agency personnel. In addition to new sections that will offer current news items, links and public policy comments, the most comprehensive new offering will be the "State Activity Action Center". Members will then have access to AIHA weekly state reports so they can monitor legislative and regulatory activity in any state. This activity center will also include existing state laws on title protection/professional recognition and will keep members abreast of title protection activity.

NIOSH Personal Protective Technology Laboratory Site Adds Topics Pages

The NIOSH Personal Protective Technology Laboratory (NPPTL) has updated its web site to include topical interest pages for specific areas. The "Respirator Topics Page" has just been updated to consolidate NIOSH information related to respirators and their use. Included are links to NIOSH documents, updates on Respirator Users Notices, and other resources. For example, a new notice reports that Aearo has withdrawn 9 approval numbers for their mercury vapor/chlorine respirators using the R59A cartridge because of difficulties users have in seeing the end of service life indicators while wearing the respirators (see http://www.cdc.gov/niosh/npptl/run_0202.html).

For more on the NPPTL pages, including their Chemical Protective Clothing Topics Page, Certified Equipment List, and more, visit the NPPTL Home Page at http://www.cdc.gov/niosh/npptl/.

OSHA Adds Spanish Content to Web Site

Following NIOSH's lead, OSHA has posted content to its web site in Spanish to reach out to non-English speaking employers and workers. The web page initially focuses on several areas: an overview of OSHA and its mission; how to file complaints electronically in Spanish; worker and employer rights and responsibilities; and a list of resources for employers and workers. "One of our top priorities is expanded outreach and education," Secretary of Labor Elaine L. Chao said. "More than 10 million Americans speak little or no English, and one in five Americans does not speak English at home. Too many of these workers, especially Spanish-speaking workers, have experienced on-the-job injuries, illnesses and fatalities." It can be accessed from their home page at www.osha.gov. Critics argue that few of the workers affected by the increasing injuries among Hispanic workers have access to the Internet, much less the knowledge to find OSHA's site, but they welcomed the provision of the information as a start.

OSHA E-Tools Provide Web-based Training

OSHA's eTools are "stand-alone", interactive, Web-based training tools on occupational safety and health topics. They are highly illustrated and use graphical menus as well as expert system modules. These modules enable the user to answer questions, and receive reliable advice on how OSHA regulations apply to their work site. There are a number of modules available from the web site index at http://www.osha.gov/dts/osta/oshasoft/index.html. The "Hospital" "tool" includes 15 modules encompassing references from OSHA standards and guidelines relating to Administration, Central Supply, Clinical Services, Dietary Services, Emergency Services, Engineering, HealthCare Wide Hazards, Heliport Operations, Housekeeping, ICU, Laboratories, Laundry, Pharmacy, Surgical Suite, and Other HealthCare Wide Hazards.

INDUSTRIAL HYGIENE PROFESSIONAL NEWS

Project Planned to Study the State of Health and Safety Profession

The Center for Environmental Innovation (CEI), in partnership with the Wharton School at the University of Pennsylvania, will conduct a "Pulse of the Profession" project. Project director Jim Leemann, said that many organizations are concerned that a large number of safety and health professionals are reaching their retirement years. While experts say the current need for job safety and health professionals is being met, they predict that a crisis will arise as the first generation leaves the field. Enrollment in occupational safety and health specialties at colleges and universities has dropped, and some experts say those who will graduate lack the experience needed to cope with unexpected issues on the job. Others suggest that the field itself may be changing and a new and different model for job safety and health will be needed in the 21st century.

The initial phase of the project will involve a general survey of EHS professionals combined with up to three, one-day focus group sessions hosted at The Wharton School. CEI states, "The purpose of this phase is to prove or disprove the underlying hypothesis that the professions may be in a difficult position to adequately deal with emerging issues." The survey and initial focus group sessions will include a report on the:

- Current state-of-the-health of the EHS professions;
- Essential practices to avoid losing EHS professionals; and
- Key areas for further investigation.

The second phase will focus on the development of guidelines and best practices for organizations to utilize in maintaining and sustaining their EHS professional workforce, such as:

- Steps being taken to address the coming wave of EHS professional retirements,
- Current best practices to develop an EHS professional workforce,
- Member needs from their professional organizations, and
- Management's perspectives, expectations, and value for the EHS function.

Sponsors of the project include the American Industrial Hygiene Association, the American Society of Safety Engineers, the National Environmental Health Association and the National Association of Environmental Professionals. Details of the project are available on the CEI web site at: http://www.enviro-innovate.org/.

JUST THE FACTS

OSHA "Significant " Case Load is Declining

OSHA has historically tracked the number of significant cases--essentially, those where employers face fines of $100,000 or more—as one measure of the effectiveness of its enforcement program. For recently released figures, the number of:

- significant cases declined, from 170 cases in FY 2000 to 141 in FY 2001, with 24 cases in the first 5 months of FY 2002.
- high-profile egregious cases, under which firms are cited for each instance of a violation, often resulting in high-dollar penalties, was 6 in 2000, increasing to 8 in 2001, with none issued so far in the first 5 months of FY 2002.
- repeat violations declined from 2,045 in FY 2000 to 1,992 in FY 2001, and is currently at 672 violations for the first five months of fiscal 2002.
- citations for serious violations in FY 2000 was 52,705, then climbed to 53,365 in FY 2001, and is currently at 18,994 citations for the first five months of FY 2002.

Aerotech IAQ Facts

Microbial Facts:

- *S. rectivirgula* formerly known as *Micropolyspora faeni* is a thermophilic actinomycete that is one of the etiological agents of farmer's lung. Farmer's lung is a hypersensitivity reaction to repeated exposure to the actinomycetes, particularly the thermophiles. These types of thermophilic actinomycetes are usually found in closed barns, silos, grain mills, bagasse (sugar cane waste) and poorly maintained air conditioning ducts.
- *Legionella* is a Gram negative bacteria that can cause Legionnaires' disease and Pontiac fever. Human infection can be contracted through the inhalation of

water droplets containing *Legionella* bacteria. Symptoms can include flu-like symptoms, such as chills, fever and cough.

Fungal Facts:

- *Geotrichum sp*. is a yeast that is commonly found in dairy products, less common in soils and is also a part of normal human flora. This genus can sometimes be pathogenic to man. It is characterized by the formation of chains of colorless, slimy spores (conidia) through the fermentation of vegetative filaments and can be classified as an ascospore. Some species have strong odors.
- *Pithomyces sp*. is often found growing on decaying plants, especially grasses. It can produce a mycotoxin called sporidesmin (a piperazinedione). This fungus is known to be pathogenic in animals causing facial eczema and liver damage. Spores are produced at the apex of short side branches of vegetative filaments, dark brown, 2- to several celled. The most common isolated species is *P. chartarum* and its spores have both longitudinal and transverse septa.

PUBLICATIONS

OSHA Introduces "QuickTakes" E-Newsletter

OSHA announced "QuickTakes" - a new OSHA e-memo filled with timely information about agency activities. Each month, subscribers will receive, via e-mail, a summary of safety and health highlights including news and announcements, background information and other resource material. There will be links to the OSHA web site and others related to safety and health that provide additional information on particular items. To subscribe, click on the QuickTakes link on OSHA's website at www.osha.gov.

NIOSH Provides Video on TB Respiratory Protection

NIOSH video #215, *TB Respiratory Protection: Administrator's Review*, takes viewers step-by-step through developing a respiratory protection program for tuberculosis in health care facilities. Topics covered include risk assessment, standard operating procedures, respirator use, and training. Principles discussed in the video are also applicable to other settings where respiratory protection programs are necessary. A CD containing the written NIOSH guide for program administrators accompanies the video. To request copies of the video, contact the NIOSH video library by e-mail to: rlw3@cdc.gov.

NIOSH Electrical Safety Student Manual

NIOSH Publication 2002-123, Electrical Safety: Safety and Health for Electrical Trades - Student Manual is available from NIOSH and on their web site as an Acrobat® PDF file. This student manual is part of a safety and health curriculum for secondary and post-secondary electrical trades courses and is designed to engage the learner in recognizing, evaluating, and controlling hazards associated with electrical work. Major topic areas include:

- Dangers of Electrical Shock
- Burns Caused by Electricity
- Overview of the Safety Model
- Safe Work Practices
- Safe Work Environment

The document may be viewed from the document's web page at http://www.cdc.gov/niosh/02-123pd.html.

ASHRAE Approves Five Addenda to ASHRAE Standard 62

ANSI/ASHRAE Standard 62-2001, Ventilation for Acceptable Indoor Air Quality, sets minimum ventilation rates and other requirements for commercial and institutional buildings. Five addenda to the standard were approved for publication at the Society's 2002 Winter Meeting.

- Addendum 62v addresses balancing, plenum mixing systems, exhaust duct location and documentation. If outdoor air is poorly distributed in such systems, units that are far from the outdoor air supply to the plenum may not receive the intended levels of outdoor air. In any air distribution system, required airflow can only be assured by measuring actual airflow and adjusting dampers and orifices to account for the effect of as-installed duct pressure drops.
- Addendum, 62i provides guidance on when to use the indoor air quality procedure, describing situations in which the IAQ procedure can or must be used, and does so in mandatory and enforceable language.
- Addendum 62t clarifies requirements related to condensate management, including drain pan design, carryover from cooling coils and access for inspection and cleaning.
- Addendum 62u relates to the control of ventilation systems, specifically controls to ensure adequate ventilation whenever buildings are occupied and under any thermal load conditions.
- Addendum 62ab addresses equipment that generates contaminants and the need to duct such equipment with integrated exhaust ventilation to the outdoors.

Published addenda to ASHRAE standards are available for free at ASHRAE Online at http://www.ashrae.org/. Also debated at the winter meeting were proposals for "Guidance for Ventilating Smoking Areas", but resolution was not reached.

USA CHPPM Publications

The following fact sheets and technical guides of the USA CHPPM are available by request or from their web site (http://chppm-www.apgea.army.mil/).

Topic	Fact Sheet Number
Babesiosis	18-007-0202
HIV/AIDS	22-002-0102
Countering Terrorism of Drinking Water Supplies	31-002-1001
Anthrax	36-001-1001
Handling Suspicious Packages	36-002-1001
How to Handle Mail with a Biological Threat	36-003-1001
Dealing with the Stress of Recovering Human Dead Bodies	36-004-0202
Bloodborne Pathogens (series of fact sheets)	59-001-1001 through 59-013-1001
Hazard Communication (HAZCOM) Training Program	59-014-0102
Topic	**Tech Guide Number**
U.S. Army Food and Water Vulnerability Assessment Guide	TG 188
Glossary of Terms for Nuclear, Biological and Chemical Agents and Defense Equipment	TG 204
Chemical Exposure Guidelines for Deployed Military Personnel	TG 230
Diagnosis and Treatment of Diseases of Tactical Importance to U.S. Central Command	TG 273

ARMY ITEMS OF INTEREST

USA CHPPM Sponsors Ventilation and IAQ Course

USA CHPPM is sponsoring the Industrial Ventilation and Indoor Air Quality Course during June 17-21, 2002.

Course Description:

- Basic and advanced concepts of industrial ventilation will be covered through lecture, laboratory sessions, and practical exercises. Emphasis is on the characteristics of air to include air flow and pressure relationships; design of ventilation systems used to prepare a basic concept design; selection of fans; and the role of dilution ventilation in industrial environments including calculations for predicting dilution ventilation rates. The course will also include a demonstration of the instruments and methods used in testing ventilation systems.
- Indoor Air Quality will present the basic strategies of evaluating and correcting indoor air quality problems with special emphasis on the use of ASHRAE Standard 62-2001, Ventilation for Acceptable Indoor Air Quality, and ASHRAE Standard 55-1992, Thermal Environmental Conditions for Human Occupancy in evaluating work areas. Upon completion, attendees will be able to evaluate indoor air quality complaints and HVAC equipment (to include, operation, and maintenance), and provide recommendations insuring applicable standards are being met.

Other Details:

Competence in basic math is required for this course. Applicants should bring a scientific calculator. Applicants must be military or civilian personnel with responsibilities to directly support the DA, National Guard or other DoD industrial hygiene or occupational health programs. There is a $200.00 registration fee. As part of this course, you will receive the ACGIH Industrial Ventilation Manual and the ASHRAE Standard 62-2001, Ventilation for Acceptable Indoor Air Quality. Central funding from CHPPM is not available.

For more information, contact Doris Knapp in the CHPPM Training Office at DSN: 584-4158/Comm: (410) 436-4158 or visit the CHPPM Course web page at http://chppm-www.apgea.army.mil/trng/describe.crs/d5901.htm.

ADMINISTRATIVE INFORMATION

This document was prepared for the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), Directorate of Occupational Health Sciences. The POC at the USACHPPM is Mrs. Sandy Monk; Program Manager; Industrial Hygiene Management Program; DSN: 584-2439; COM: 410.436.2439; e-mail: Sandra.Monk@apg.amedd.army.mil.

This document summarizes information and regulatory actions that are relevant for Army Industrial Hygiene Program personnel. We distribute this summary in electronic form only. Please make it available to your staff if they do not have direct access to an electronic copy. If you would like to be added to the electronic mailing list or if your email address changes, please contact Tammy Budkey, e-mail: tammy.budkey@apg.amedd.army.mil; or call her at DSN: 584-2439; COM: 410.436.2439; fax: 410.436.8795.

At a minimum; we review the following publications in preparing this summary: AIHA Journal; the Synergist; Today (ACGIH's Newsletter); The ABIH News; OSHA Week; the Federal Register; BNA OSHA Reporter; Applied Occupational and Environmental Hygiene; The Journal of Occupational and Environmental Medicine; The Journal of Environmental Health; Professional Safety; Occupational Hazards; Occupational Health and Safety; and Industrial Safety and Hygiene News. We also gather information from a variety of sources on the Internet.

If you have questions or comments; please contact Jim Evenden at jevenden@lmi.org; 410.638.2081/2086 (voice) or 2093 (fax).